

REMARKS

Claims 1, 3-7, 10-21, 24-30, and 34 are pending. Claims 1, 4-6, 10-17, 21, 24-26, 28, and 30 have been amended, claims 2, 8, 9, 22, 23, and 31-33 have been canceled, and new claim 34 has been added.

Reconsideration of the application is respectfully requested for the following reasons.

In the Office Action, claims 1-5 were found to be objectionable essentially for failing to provide antecedent basis for the term “power down mode,” and claim 16 was found to be objectionable for failing to indicate that the first and second modes are first and second “power” modes. Claims 1 and 16 have been amended to overcome the objections.

Claims 2, 3, 8, 17-20, and 31-33 were rejected under 35 USC § 112, second paragraph, for failing to provide antecedent basis for “the idle state.” The claims have been amended to provide an antecedent basis for this term, for the claims that remain pending in the application.

Claims 1-7 were rejected under 35 USC § 102(e) for being anticipated by the Souza patent. This rejection is traversed for the following reasons.

Claim 1 recites a filter driver configured to generate a signal to cause the device driver to individually change the power mode of the device to operate in the reduced power mode when the computer system is in the operating mode. The filter driver generates the signal by “detecting that the device is in an idle state, after said detecting, determining an accumulated amount of time the device has been in the idle state, comparing the accumulated amount of time to a predetermined time, and based on a result of said comparison, controlling the device to operate

in the reduced power mode independently from the computer system continuing in the operating mode.” These features are not disclosed by the Souza patent.

The Souza patent discloses a system that controls the power mode of one or more peripheral devices coupled to a computer system, independently of a power mode of the computer system. For example, the system places a peripheral in a low power mode while the computer system is operating at full power. This is accomplished through the use of USB host controller 86 operating in combination with a USB stack.

In spite of these disclosures, the Souza patent does not disclose the features added by amendment to claim 1. More specifically, in operation, Souza places a peripheral in a low power mode after the system detects that the peripheral has entered an idle state. In contrast, claim 1 recites “determining an accumulated amount of time the device has been in the idle state” after the device has been detected to be in the idle state. Claim 1 then recites “comparing the accumulated amount of time to a predetermined time, and based on a result of said comparison, controlling the device to operate in the reduced power mode independently from the computer system continuing in the operating mode.” These features are not disclosed by the Souza patent.

Claim 6 has been amended to recite changing a power mode of one of the devices from the first power mode to the second power mode when the computer system is in the first power mode, said changing including “detecting that the device is in an idle state, after said detecting, determining an accumulated amount of time the device has been in the idle state, comparing the accumulated amount of time to a prescribed amount of time, and based on a result of said

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comparison, changing the device to operate in the second power mode independently from the computer system continuing in the first power mode.” The Souza patent does not disclose these features.

Because the Souza patent does not disclose all the features of claims 1 and 6, it is respectfully submitted that the Souza patent does not anticipate these claims or any of their dependent claims. Withdrawal of the § 102(e) rejection is therefore respectfully requested.

Claims 8-33 were rejected under 35 USC § 103(a) for being obvious based on the Souza patent taken alone. This rejection is traversed for the following reasons.

Claim 14 recites that “the prescribed amount has a first timeout value in a battery mode, a second timeout value in a performance mode, and the prescribed amount varies according to an object device, and wherein the prescribed amount or said at least one device is set by a user or preset.” The Souza patent does not teach or suggest any of these features.

Moreover, in rejecting claim 14 and other claims, the Examiner merely stated that one of ordinary skill in the art would have recognized that Souza includes a timer. Applicants respectfully disagree. The Souza system operates as an asynchronous system; that is, Souza changes the power mode of a peripheral device as soon as the device is detected to be in an idle state. Souza uses no timers nor does it perform any resetting or queuing operations (to be discussed in detail below) as recited in claim 14 and other pending claims. Based on these differences, it is therefore respectfully submitted that claim 14 is allowable.

Claim 17 recites “changing a power mode of the device from the operating mode to a

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power down mode when the idle state is not reset for a predetermined time.” (Emphasis added). As explained above, the Souza patent does not teach or suggest resetting a predetermined period of time as a basis for changing power mode of a device connected to an operation system. Accordingly, it is respectfully submitted that claim 17 and its dependent claims are allowable over Souza.

Claim 21 recites a queue-based method for controlling the power mode of a device. This method includes “receiving a plurality of messages, storing the plurality of messages in a queue, and controlling a power mode of the device based a state of the queue, said controlling including powering up the corresponding device when a first message is output from the queue and powering down the corresponding device when a last message is output from the queue and the queue is empty.” The Souza patent does not teach or suggest these features.

Moreover, in rejecting claim 21, the Examiner merely stated that the features recited in this claim and its dependent claims would have been obvious. Such a statement is based on a mere gratuitous assertion which, both the Board and the Federal Circuit have held, cannot rise to the level of establishing a *prima facie* case of obviousness. Accordingly, it is respectfully submitted that claim 21 is allowable along with its independent claims.

Claim 24 separately recites that “if an IRP is received from an IO manager in a Kernel mode, executing at least one dispatch routine to receive different kinds of packets; and checking whether the received IRP is a power IRP, and if the received IRP is not a power IRP and ~~but~~ an internal variable Suspend flag = a predetermined value, placing a packet in the queue for normal

filter driver operations.” None of these features are taught or suggested by the Souza patent.

Claim 25 recites that “if a packet enters into the queue, automatically dispatching a routine for the corresponding device; powering up the device if the device has been in the power down mode; transferring one packet from the queue to an associated next device driver; and completing the routine if the queue is empty, and if the routine is not dispatched again until a first timer is timeout, transferring at power manager, a power down IRP to the device to change the device to the power down mode.” None of these features are taught or suggested by the Souza patent.

Claim 26 recites that “if the device is being used, resetting the first timer to prevent the first device from being in the power down mode.” None of these features are taught or suggested by the Souza patent.

Claim 27 recites that “the packet is given a lower priority in an operation system and thus dispatched after packets with higher priorities are first treated by the operation system, making the queue loaded with a plurality of packet IRPs.” None of these features are taught or suggested by the Souza patent.

Claim 28 recites that “if a received packet is a power IRP, checking whether the received packet is a system power IRP for changing the power state of the computer system; if the received packet is the system power IRP, checking whether the received packet is S0 being a new state among IRP data; if the received packet is not S0, setting an interval variable to Suspend flag = a predetermined value since the computer system is now entering in the power down mode,

and blocking any additional IRP to enter to the queue; and clearing all IRPs currently remaining in the queue.” None of these features are taught or suggested by the Souza patent.

Claim 29 recites that “if a received packet is a power IRP, checking whether the received packet is a system power IRP for changing a power state of the system; and if the received packet is the system power IRP, proceeding to a next device driver.” None of these features are taught or suggested by the Souza patent.

Claim 30 recites that “if the received packet is the power IRP, checking whether the received packet is the system power IRP for changing the power state of the system; if the received packet is the system power IRP, checking whether the received packet is S0 being a new state among IRP data; and setting an internal variable to Suspend flag =[a predetermined value since the system is being enabled if the received packet is S0.” None of these features are taught or suggested by the Souza patent.

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and timely allowance of the application are respectfully requested.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and

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